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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,604	08/03/2001	Kamron M. Wright	03-L0-6740	3022

7590 11/20/2002
John S Beulick
Armstrong Teasdale
One Metropoliatn Square Suite 2600
St Louis, MO 63102

EXAMINER

ELKASSABGI, HEBA

ART UNIT PAPER NUMBER

2834

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,604

Applicant(s)

WRIGHT ET AL.

Examiner

Heba Elkassabgi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

New corrected drawings are required in this application because the submitted drawings are objected by the draftsman. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "102" has been used to designate both the endshield and control assembly in the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms (U.S. Paten 4668898) and further in view of DuBois et al. (U.S. Paten 5757096) and Nadir et al. (U.S. Patent 6291912).

Harms disclose in Figure 3 a control assembly (PCB)(21) in contact with the inner surface and a power assembly that is connected to the control assembly (PCB) (21), in which the inner surface comprises of a substantially flat raised area for contacting the control assembly (21). The control assembly comprises a control board and a plurality of power transistors connected to said control board. To recessed fins extend from said substantially flat raised portion. Comprising a cap plug opening extending through said endshield and a cap plug covering said cap plug opening..Power assembly comprises a power board and an insulator positioned between said Power board and said control board. endshield further comprises a plurality of bolt openings that extend through said endshield for receiving a through bolt.

DuBois et al. discloses in Figure 1, an endshield (housing)(10) comprising an outer surface and an inner surface having a plurality of fins (34), in order to provide means to cool the rectifier diodes to prevent burnout.

Nadir et al. discloses a control assembly having a thermal pad (27, between the power transistors and the endshield (41), the thermal pad (27) for transferring heat from transistors is for electrically isolating the transistors. The power transistor comprises of a plurality of leads (36), in which each of the leads extend substantially parallel to the control board (7). The transistors comprise of a top surface, a bottom surface, a back, and a tab, with the bottom surface contacting the control board (7). The tab extends from the back along the top surface, and that the power transistor further includes a front, leads (37) that extend from the front of the power transistor to a position closer to the bottom surface and than to the top surface. The endshield is configured as a heat sink (12) and that the tabs contact a thermal pad, which provides a thermal interface to the endshield. A first spacer extends between the control board (7) and the power assembly. A plurality of clamp bars are positioned between the power assembly and the power transistors, having a first spacer and extending through the insulator; in which the second spacer extends between the control board (7) and the endshield, in order to isolate the component from radiating heat to the other components without increasing the overall size of the motor.

It would have been obvious to one of ordinary skill in the art to modify Hams with Nadir in order to isolate the component from radiating heat to the other components

without increasing the overall size of the motor and to modify DuBois to provide a means for cooling the rectifier to prevent burnout.

In regards to the material choice in Claims 9 and 12, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose a suitably material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harms (U.S. Patent 4,668,898) and further in view of Nadir et al. (U.S. Patent 6,291,912).

Harms discloses in Figure 1, a motor endshield (10) for an electronically commutated motor, in which the endshield (10), comprises of a shaft through hole and internal surface is substantially a flat raised area (32) and that the recessed fins (34) surrounds the opening of the shaft. The recessed fins (34) extend from the substantially flat raised portion (32) and that a plurality of recessed openings that extend through the endshield openings for receiving a bolt.

Nadir discloses in Figures 4-8 a cap plug (3) opening that extends through the endshield (16) and that the endshield (16) is configured as a heatsink (12), in order to isolate the component from radiating heat to the other components without increasing the overall size of the motor

In regards to the claims of 21-25 the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Heba Elkassabgi
November 16, 2002

Thomas M. Dougherty
THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2100
2900